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A Few Lamenesses.*

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When I accepted the kind invitation of your Honorary Secretary to read a paper at this meeting, I did not then decide upon the subject. At the time, I was almost tempted to furnish some information about lameness in the young—in the foal and yearling, as compared with the fully-grown horse—but I had to abandon that decision in favour of a short paper on a few lamenesses, and regarding the remarks I shall make to-day, I wish to warn you before I proceed that it is not my desire or intention to describe any lameness under nature, cause, symptoms and treatment: I shall confine my remarks to a few observations on certain phases of a few lamenesses.

I think it is a good thing now and then to revise our views of some of the lamenesses, and proceeding on that ground, I propose to refer, first of all, to laminitis.

What is laminitis? Some would answer: inflammation of the sensitive laminæ. But as cases vary considerably the definition of laminitis should be revised and made more comprehensive. In some cases—those that recover within a few days—the affection is a congestion of the laminæ; in other cases, there is inflammation with exudation of the laminæ, sensitive sole and coronary band. The attack may be acute or subacute. When acute, the inflammatory process may involve the *os pedis* and coffin joint. When the subacute attack passes into the acute, ostitis of the coffin bone may be intense, while inflammation of the laminæ may have almost subsided. Protracted cases of laminitis generally terminate by becoming chronic. A subacute attack, if developed slowly, is likely to have a similar termination.

Chronic laminitis is distinguished by alterations in the hoof, deformity of the foot and atrophy with displacement of the pedal bone—the horse going on the heel.

What are the causes of laminitis? Some observers recognise a hereditary form; others, a latent laminitis, which appears to require, as the exciting cause, exposure of the horse to fatigue, overwork or a long journey. Is there a dietetic laminitis? Is an attack following engorgement of certain grains a mere coincidence or a proved case of cause and effect? When a horse fills his stomach to repletion with wheat or oats or barley, is he certain to suffer from laminitis? Cases could be quoted for and against the occurrence of dietetic laminitis, yet many observers never question diet as a cause of an attack.

Is superpurgation a cause of laminitis? If so, there must be many exceptions.

Is infection a cause? This is probable, but not yet proved. The best example of this cause may be seen in parturient laminitis, which is usually associated with endometritis in the mare. Chronic laminitis in a brood mare may become acute after foaling.

Laminitis of a single foot—the supporting one—is fairly common. How does it arise? Prolonged slinging of the horse is often followed by laminitis, ostitis and displacement of the *os pedis* of one foot. In such cases the supporting foot may require more attention than the injured opposite limb, which may be unable to share in supporting the weight of the fore or hind quarters. Why is it that injury to a foot—bruising of the sensitive membrane with or without pedal fracture—is not often followed by symptoms of laminitis? In such cases, the laminitis is limited to the injured part, unless infection with pus formation takes place, when the whole interior of the foot may be involved.

The symptoms of laminitis need not be described, but in some cases the premonitory symptoms of an acute attack may mislead the practitioner. The early symptoms—fever, blowing, sweating, etc., may predict pleurisy, enteritis or laminitis; in fact, treatment of pleurisy may be in progress before the feet show definite symptoms of laminitis.

Navicular Disease.

What is navicular disease? It is an ostitis, chondritis, bursitis and tendinitis of the navicular region of the foot. The navicular bone and its fibro-cartilage are always more or less affected. The lesions vary in extent and in degree, and the primary condition is a rarefying ostitis of the navicular bone. Later, the inflammatory process will be found extending to the fibro-cartilage, the navicular sheath and the opposing surface of the perforans tendon, which becomes roughened, frayed and, sometimes, attached to the navicular bone. In the established or chronic case one may expect to find evidence of disease in all four structures just mentioned and, occasionally, ostitis of the *os pedis*.

The recognised causes—heredity, concussion, wear and tear of constant work on paved roadways—have not been proved, but there is good ground for the belief that when navicular disease appears in an unbroken two or three-year-old colt or filly, that has done no work, it should be attributed to heredity.

Heredity as a cause receives some support from the early occurrence of navicular disease in the progeny of the sire or dam that has long been affected with this disease.

In horses six years old or more, this disease appears to be due to constant hard work which induces ostitis of the bones within the hoof.

Symptoms largely depend on the character of the lesions. When the navicular sheath is involved, lameness is very noticeable and when the perforans tendon is frayed or attached to the bone, lameness, though somewhat modified by exercise, does not disappear, the horse being always more or less lame. Pointing of the affected foot may be overlooked or misunderstood. Navicular pointing is nearly always restricted—the foot being advanced only a few inches with the heel eased or slightly raised from the

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ground. Pointing in bruised heel or corn is much more extensive—the foot being carried well forward, in the same way as when the foot is being rested from fatigue. Corn and navicular disease may co-exist in the same foot. When corn is a cause of lameness, exercise brings about little or no modification of the action of the limb. Lameness is continuous, and it may even increase under exercise. In such case the existence of navicular disease may not be suspected unless there is noticeable alteration in the shape of the foot. Diagnosis of navicular disease complicated by corn can only be positively made by removing the effects of the bruise and afterwards retesting the horse for symptoms of navicular disease.

Alterations in the shape of the foot or feet do not appear until the disease is fairly well established. This does not apply to navicular disease in the very young horse, in which the disease is probably connected with heredity.

A navicular foot is small, blocky or upright at the quarters and heels; the hinder part of foot is narrow or contracted, the frog small, the sole noticeably concave. These alterations are accompanied, or soon followed by, straightening of the fetlock and pastern and constriction of the coronet, which are most conspicuous when the disease is one-sided.

Navicular disease, at first, may be confined to one foot, the other remaining sound or free from symptoms for a variable time, but generally the other foot sooner or later suffers.

Variation of the surface temperature of the hoof is a useful symptom, especially in the one-sided case, and it is helpful when both feet are affected, but repeated application of the hand to the hoofs is necessary to discover the variation. Occasionally, navicular disease will be found affecting a foot of good or normal shape. Attention is drawn to the case by loss of action and intermittent slight lameness—not sufficient to prohibit the use of the horse for pleasure work.

There is no definite rule as to the progress of navicular disease. Many cases appear to reach a certain stage and, afterwards, for a year or two (depending on the work done) show little or no appreciable change in gait or action. Some cases become unworkable in the course of a few months.

Diagnosis of Chronic Navicular Disease affecting both fore feet is not very difficult, but the recent or slight one-sided case may puzzle any careful practitioner. Lameness is not continuous and, when existing, it varies in degree.

One of the earliest symptoms is loss of action, shorter steps and less elevation of the feet, especially at the beginning of work or exercise or when going down hill. This loss of action, with occasional temporary lameness, may continue for months with no definite or continuous lameness.

The next symptom is intermittent and variable lameness—often attributed to stumbling or a blow. It recurs unaccountably and this may lead to veterinary examination of the horse. The veterinary surgeon may find the horse sound in action and nothing more may be done until the lameness recurs more frequently or persists for a longer time. In the hunter, symptoms may be aggravated by a hard day or a long journey by road. By this time some alteration in the form of the foot may be discernable, or the fetlock and pastern may appear more upright, with the coronary border of the hoof slightly constricted.

Treatment.—Thick-heeled shoes; grooving the hoof, if much contracted at quarters and heels. Neurectomy, once, twice or thrice, though a third neurectomy is frequently followed by sloughing of the hoof or degeneration of tendons.

Paralysis of the External Popliteal Nerve.

This affects the flexor metatarsi, and the extensors of the pastern and foot (*peroneus* and *extensor pedis*).

This nerve, a branch of the sciatic, leaves its parent trunk at the gemini muscles of the pelvis. It proceeds downwards and forwards between the triceps cruris and gastrocnemius muscles and at the external lateral ligament of the femoro-tibial joint it terminates in two branches—musculo-cutaneous and anterior tibial nerves. One branch (musculo cutaneous) innervates the lateral extensor of the pastern (peroneus) eventually disappearing in front of the shank.

The other branch (anterior tibial) supplies the extensor pedis and flexor metatarsi muscles. The nerve descends the leg under the extensor pedis, passes over the hock alongside the pedal artery and follows it to near the fetlock, then onwards to the skin of the pastern.

Causes.—The cause may not be known. The leg, slipping suddenly forward, may produce compression of the nerve; a violent blow over the course of the nerve—as a kick from another horse—may produce paralysis. Strangles infection, with abscess formation, as happens sometimes after castration, may be the cause. But often there is no discoverable cause and no external sign of injury to the limb.

According to Goubaux, sudden violent compression of this nerve bruises the capillaries of its sheath and surrounding connective tissue and in consequence of the resulting extravasation the nerve is paralysed.

Symptoms.—At rest the pastern is flexed; in forward movement the foot is trailed forward and inward; in setting the horse back the fetlock is extended, the foot flat on the ground; when trotted or cantered the horse drags the limb—the foot trailing; the hock cannot be flexed. When the horse is seen the fetlock and the front of the pastern may rest on the ground. Later, atrophy of the affected muscles occurs.

Treatment.—No particular form of treatment is indicated. Recovery may take place suddenly.

Flexor Metatarsi Lameness—Horse or Ox.

This lameness is due to rupture or strain or partial rupture of the tendinous band which lies over the muscle and extends from the femur to the metatarsus and which acts on the stifle and hock joints; that is, when the hock is flexed the stifle is also flexed. In rupture of this band or tendon, flexion of the stifle is not accompanied by flexion of the hock. The hock is carried straight or in over extension and the tendo Achillis is relaxed, the limb being moved from the stifle.

Like other lamenesses, flexor metartarsi lameness varies in degree—probably the rupture is incomplete in some cases; in others, the limb below the stifle appears useless in progression; and in mild cases the hock is slightly

flexed in forward movement. By some, this lameness is regarded as a good example of mechanical inability.

The position of the rupture is not often discoverable. Generally, there is no outward sign of injury. Failure to locate the position of the rupture has led some observers to attribute the inaction of the flexor metatarsi to paralysis.

Diagnosis is not difficult to anyone who has seen a case. But when seen for the first time, this lameness may direct attention to the Achilles tendon, which is much relaxed. This lameness may be mistaken for fracture of the tibia. The cause of the rupture may not be known. In most cases there is no wound or bruise over the course of the muscle and palpation may not reveal any painful spot.

The injury may be contracted by the horse in the stable during the night, or during the day in harness or under saddle—owing to slipping or twisting of the limb or to the foot slipping backwards when the horse is starting a load. It is also contracted in the travis in shoeing, and in jumping.

Treatment.—Rest for six weeks to four months. If associated with bruising of bone it may be incurable.

The position of rupture varies. It may be near the origin of the tendon close to the femur, but more often it is about the midpoint of the muscle on the tibia. The ends of the ruptured tendon do not separate very much, as they are held by the muscle and its attachments to the tendon.

The cause of this lameness has been proved by experiment by section of the tendon.

Curb.

The average case of curb is due to partial rupture of the calcaneo-metatarsal ligament near its insertion into the head of the small external metartarsal bone. The injury is represented by a limited prominence on the posterior border of the hock—on a level with the chestnut.

In some cases of apparent curb, the prominence is not due to strain of the ligament but to congenital enlargement of the head of the small external metatarsal bone. This sort of prominence has been described as "false curb."

Another and less common case of curb presents a considerable swelling which forms a convexity on the posterior border of the hock, between the head of the metatarsus and the summit of the calcis. This condition is known as "diffused curb" and is produced by chronic inflammation of the annular ligament of the hock, the tarsal sheath and the calcaneo metartarsal ligament. It may follow simple curb. Although diffused curb is not common, it constitutes a serious cause of lameness, which may persist in spite of treatment by rest, counter-irritation, firing and elevation of the heels of the shoe.

Consideration of the nature of curb should include reference to the condition called "curby hock," a term which is sometimes applied to a well-formed hock, with a curb. But curby hock is a congenital deformity affecting—sometimes unequally—both hind limbs, and distinguished by forward inclination of the os calcis. In "curby hock" the os calcis, instead of being vertical, slopes forward to follow the line of the lower thigh or leg and, owing to this inclination, the seat of curb appears prominent though not diseased. Curby hocks are decidedly unsightly, but I cannot say that in wear they are much inferior to normal hocks or more liable to curb or strain of the ligament. Often, however, a curby-hocked horse tends to go wide behind and to twist the hind feet in progression.

Curb or strain of the ligament is suddenly produced, by the limb slipping when the horse is starting a load or, in saddle horses, by a sudden twist of the supporting hind limb, or by suddenly pulling the horse on his haunches.

Curb has been attributed to heredity, but this cannot be accepted as the cause of the accidental lesion, unless one is prepared to believe that weakness of ligamentous tissue is transmitted to the foal by the sire or dam.

Curb may co-exist with bone spavin—with or without appreciable exostosis.

"Curby hock"—or faulty conformation of the tarsus—may be seen in the newly-born foal and, although in time the deformity undergoes modification, some indication of the peculiar conformation remains throughout life. Simple or small curb, or slight strain of the calcaneo-metatarsal ligament, may eventually disappear, but "diffused curb" and that condition called "false curb" are permanent, though there may be no lameness. Lameness arising from diffused curb may disappear for a time after treatment, but it is apt to recur soon after the horse resumes regular work in harness or under saddle.

Discussion.

Mr. G. P. Male: It is only ten seconds ago that the President requested me to open the discussion on the address we have just heard, but I would like to say what great pleasure it has given us all, I am sure, to hear Professor Macqueen again. (Hear. hear.) It is a very long time since he honoured the Royal Counties with a visit; I do not know how long, for I have been a member for 25 years and I do not remember him coming down during that time. I hope he will not leave it so long before he comes again. (Applause.)

It is very refreshing to have a subject such as this on lamenesses, because in these days we are rather inclined to lose touch with the clinical aspect of our work, and with the decline in some breeds of the horse and the increase in the motor car, that animal does not get the attention which was bestowed upon him in the old days.

It is rather difficult to criticise anything that Professor Macqueen has to say, because we all know the vast experience he has had and that what he says he has very good reasons for saying. So that, if I presume to attempt to criticise anything he has said, I hope he will pardon me and put it down to my ignorance.

He said that not only were the laminæ involved in laminitis, but also the pedal bone. I quite agree with him there; indeed, it is fashionable nowadays for veterinary surgeons to exclude the word laminitis and to use the term pedal ostitis. I would like to ask if there are any symptoms of distinction between laminitis and pedal ostitis. I think sometimes cases diagnosed as pedal ostitis turn out, when the animal is destroyed, to be cases of navicular disease.

With regard to hereditary laminitis, I am afraid I cannot see any reason for bringing in heredity as a cause of laminitis; there may, of course, be some peculiar formation of the foot which predisposes to laminitis, but I think we should hardly call it hereditary.

Concerning dietetic laminitis, I suppose we have all seen, especially in certain practices, cases of laminitis following directly from feeding on large quantities of wheat or other corn, particularly new wheat. I remember in one country practice, where I was many years ago, that whenever we saw a horse with laminitis we always went up to the manger, and almost invariably we found wheat there. It is interesting to conjecture how this could be a cause of laminitis, but I think it may have the same effect as super-purgation, in that it causes an inflammation

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or congestion of the mucous membrane of the bowel, resulting in the absorption of toxins from the bowel which affect the feet, or some organisms—possibly in the same way that laminitis may follow difficult cases of parturition. Professor Macqueen was rather inclined, I think, to query the existence of dietetic laminitis, because he said that there were many cases where animals had had wheat in which there was no laminitis. We might argue, in the same way, that there are many cases of mares with difficult parturition, followed by metritis, that did not develop laminitis.

Speaking of navicular disease, Professor Macqueen talked about its occurrence in two and three-year-old horses. Personally, I have never seen any such cases, and I should like to ask if they are at all common. The Professor said that he thought that the commonest cause of navicular disease was concussion on the hard roads, but I do not quite agree with that, because most cases of navicular disease that I have seen have occurred in hunters, and they have not been subjected to much concussion on hard roads, while the horses that are subject to such concussion—such as hackneys and cart horses—in my experience seldom get navicular disease, but ringbone and sidebone.

With regard to the alteration in the shape of the foot, I endorse the statement that in many cases there is little or no alteration. I had a hunter myself that had navicular disease for four years and she lived until she was 25, winning a point-to-point when she was over 20, and she had no alteration in the shape of the foot: she had a very good foot. Certainly she lost some of her action, but there was no alteration in the foot. The greatest difficulty I find with regard to the diagnosis of navicular disease is to distinguish it from some cases of low ringbone, and I should like to hear from Professor Macqueen whether he can tell us any way in which we can do that. One can inject cocaine, or some other local anæsthetic, and prove definitely that the lameness is in the hoof, but it is very difficult to say whether it is navicular disease only, or whether it is complicated with some ostitis affecting the pedal joint—in commencing cases, at any rate. I find that in ringbone, when the horse is turned in a short circle you get more flinching than in navicular disease, and it is more of a permanent lameness, but I think in advanced cases of navicular disease you also get almost permanent lameness, as the Professor has said.

I was very interested in his description of flexor metatarsi lameness. I had a case in a hunter that was so affected after falling very badly over a jump in a point-to-point. He had the typical symptoms, but in that case there was a swelling of the muscles of the thigh, and they were very hot and painful; of course, he may have strained those muscles, too. I consulted all the books I could find, but I got very little help from them as to treatment. Some advised putting the horse in slings and giving complete rest, while others thought that moderate exercise was good. I would like to know what is the best treatment for the condition. In this particular case I tried massage, electrical treatment, puncture firing right into the tendon, various blisters and all sorts of other things, but I never got the horse cured, although I produced a big improvement. He always showed that relaxation of the gastrocnemius tendon. The owner hunted him again, but got rather tired of all his friends talking about the horse, and he had him destroyed. It would have been interesting if he had gone on; personally, I think the horse would eventually have hunted just as well as he did before he had the trouble.

I would like to ask one more question, and that is, whether a slight enlargement of the annular ligament of the hock, where there was no involvement of the calcaneo metatarsi ligament, should be called a curb or not. Also, with regard to false curb, Professor Macqueen advises us to put that down on the certificate if there is any swelling of the head of the external metatarsal bone—with which I quite agree—but would he describe it as a false curb? Personally, I do not like applying the term curb to that, and I would hesitate to put it down as a false curb—it might be misleading.

Major R. J. SARGENT: I would like to add to Mr. Male's remarks, what a great pleasure it is to listen to Professor Macqueen once more. I have not heard him since my student days, and, like Mr. Male, I hesitate to criticise with regard to laminitis. Professor Macqueen has put before us a number of pros and cons; you may get it in one case of a specific nature and not in the next; you may or may not get it with pneumonia, metritis, gorging with wheat or greenstuff, etc. It appears to me that one word will go a long way towards solving these apparent anomalies, and settling many doubts as to the cause of laminitis—that word is "congestion," congestion of the blood supply in the feet. Where you have any condition likely to produce alteration of an extreme nature in the blood stream, particularly lowering of blood pressure, you are liable to find laminitis, the congestion being most likely to have its greatest effect on the weakest (as regards circulation) part, *viz.*, the foot, and owing to the horny, non-elastic structure of the same, great pressure is caused with resultant pain. This congestion is difficult to remove owing to this non-elasticity, coupled with the loss of that great essential, movement, due to pain. If congestion as the cause be conceded, it will answer Professor Macqueen's query, "Why do we not get laminitis with severe foot injuries?" In these cases the congestion brought about is purely local and the general circulation, not being affected, is able to relieve it. Congestion will also account for the absence of suppurative conditions, no specific or general organisms being implicated.

Professor Macqueen likes the "curby or sickle hock" formation from the point of view that one seldom finds true curb with this conformation; but does he lose sight of the fact that, owing to the more acute angle at which the metatarsus and os suffraginis meet, fetlock lameness often ensues? This I have frequently seen in hunters.

Captain E. C. WINTER added his thanks for the address to those of the previous speakers, and continued: As to heredity in lameness, I have never seen any evidence of it, and as to laminitis due to dietetic causes, I have seen so many cases of it that I am quite convinced that this condition is very often due to a dietetic cause. In my youth I did hunting practice almost exclusively and I found that when people wanted to get their horses ready for sale, and fed them on Indian meal and such-like things, the animals often developed laminitis.

I am convinced that navicular disease is hereditary, and we do not see it so often now because people do not breed from sires or mares with the disease. There is certainly no room for doubt that the tendency to navicular disease is hereditary. Of course, you do not, as a rule, get navicular disease in a sire, but I have seen two or three cases where mares invariably bred navicular disease affected foals, even when put to different sires. It is, I find, a good plan, in cases of suspected navicular disease, when taking the temperature of the feet, to wet both feet at once and see which dries the more quickly. I quite agree that you can get navicular disease without any malformation of the foot. I think you can tell the difference between navicular disease and low ringbone by the way the horse holds his foot. Professor Macqueen does not tell us much about treatment, but he recommends rest in flexor metatarsi lameness. That will not satisfy the client. The average man will not give the patient rest unless you give something to enforce it, and for that reason I think a good stiff blister is advisable.

Mr. J. M. ARMFIELD: Cannot we try to convince the client that that (the giving of rest) is the proper way in which to treat the case, or are we to keep on withholding our confidence from him and handing him out blisters and things?

Major F. J. TAYLOR: I hope I have fully shown my appreciation of Professor Macqueen's visit to our Division to-day by coming by motor busses from Brighton, where I should be convalescing under doctor's orders, but it is a great pleasure to see my professor of old. I almost said my old professor, but you will agree that he looks as young as he did forty years ago. I thank him very much indeed for coming amongst us (Applause.)

In reference to the causes of laminitis, I had a recent and interesting case of a horse (belonging to some boat builders of Oxford) which was stabled in a shed where they kept a lot of paint drums. The animal got loose in the night and drank half a bucket of linseed oil. During the following 24 hours he naturally suffered from intense super-purgation, and a very bad attack of acute laminitis in both forefeet supervened, from which he has not yet recovered. I do not pose as an authority in pathology or of any of the advanced sciences in connection with our profession, but, from a practical point of view, I look upon laminitis as a form of stasis of the lymphatic blood vessels of the foot, and I remember the old treatment adopted by Thompson, of Sheffield, with whom I was assistant for some years, and who had large contracts of heavy horses; when a horse was discovered with laminitis it received a physic ball and was shod at once with a rocker shoe (if it was possible to get it on his feet) and walked round the yard, and the treatment was completed by applying swabs and hose pipe to the feet. I do not believe in putting on hot poultices and strangulating the blood supply with a cord round the coronet requisite to keep the poultice on.

You will remember the number of cases of laminitis we used to get on the transports during the war. It was my good fortune, or otherwise, to go East on two occasions with boatloads of horses and mules and the position of long standing on a voyage of four to six weeks brought on very frequently, through the horses not being able to stale, a form of lymphatic stasis and uræmia, which was followed by attacks of laminitis. I should like to ask Professor Macqueen if he can throw any light on ship's laminitis, and how to prevent it when exercise is impossible.

Recently I have had cases of laminitis in horses used for the rollers on the College playing fields, a number of cases occurring almost simultaneously. I do not know whether the weather is responsible. They work them without iron shoes, but with grass boots on, and the continuous sole pressure and walking on the dry ground we have had lately may account for it.

In regard to navicular disease, there was a period in my life—a brief one—when I thought I thoroughly understood this disease: when I was a student 35 years ago, and I looked upon Professor Macqueen as my personal friend, as I do now, and as I hope I always shall. It was my privilege as a student to live in the same direction as he, and we walked home together on many occasions. On one of these occasions he asked me what I was specially reading, and I replied that I was reading up all I could find on the subject of navicular disease. "A very interesting subject; you ought to be quite an authority on that, then." A few days afterwards he was holding a "grinding" class, and the subject, unfortunately for me, was navicular disease. Professor Macqueen said: "Well, gentlemen, we have someone with us this afternoon who is an authority on navicular disease. Now, Mr. Taylor, let us hear what you know about navicular disease." Glad of the opportunity, and thinking that my name would be made for the rest of my college life, I expounded all I thought I knew on the subject. Professor Macqueen's comment at the end of my futile remarks was, "All your reading has been in vain, Mr. Taylor, you don't know a d—— about the subject." (Laughter.) That was 35 years ago, and I think my knowledge of the disease has remained stationary ever since. I certainly have never cured a case and the relief given by unnerving is, in my opinion, a barbaric method of empirical cruelty and should be made illegal.

Captain W. L. Little: I would like to add my thanks to Professor Macqueen for coming down to-day to speak to us once more; it does remind one of old times. (Applause).

I have not much to say on the subject before us this afternoon, but the dietetic cause of laminitis has been discussed, and I think it might interest you to know that, during the war, in our remount depôts in America, the horses were run in large bunches in open paddocks, and they were fed oats and maize out of bins; they also had long hay in racks. During the whole of the time I was there I never had a case of laminitis, and I had only one case of colic, though the horses used to gorge themselves with the oats and maize. Moreover, although running loose in the paddocks, they did not really get a great deal of exercise.

Professor Macqueen mentioned that external popliteal lameness was very similar to stifle lameness, but I do not remember that he told us how to distinguish one from the other, or to which stifle lameness it was somewhat similar. It might be mistaken for a partial dislocation of the patella.

Major Hamilton Kirk added his thanks to those expressed to Professor Macqueen by previous speakers and continued: I would like to exemplify the existence of dietetic laminitis. A fortnight ago I bought a five-year-old heavy draught for one of the London Borough Councils. After a few days doing light work in a dust cart, it developed an acute attack of laminitis in both fore feet. A member has told us that it happens only in horses that have bad feet, but this horse had splendid feet. The animal was on a fortnight's trial and had only a very soft job, so that it was not a case of hard work, or concussion on hard roads, so I presume the cause of the attack was due to changes in the feeding.

Professor Macqueen did not mention other lamenesses, such as arise from corns, ringbone and other causes, but I should like to ask him a question about corns, *i.e.*, whether he thinks that lameness from a corn arises suddenly? I have frequently to go professionally to one or two of the Police Courts in London, and it depends upon what Court one is in and what the magistrate has learned from the veterinary surgeon at that Court, whether lameness from a corn is regarded as arising suddenly or gradually. My belief is that the lameness arises gradually, but opinions seem to differ. I cannot see how it can be sudden. There must be a beginning to the pain and as more and more blood is extravasated, or pus is increasingly formed, so the pressure must proportionately increase and the lameness must become worse.

One other question regarding the cruelty cases in Courts. One often has to decide how long a horse has been lame, before a magistrate can convict, or otherwise. If you see a horse with a swollen flexor, and there is no heat or tenderness on pressure, and yet the horse is working lame from the tendon, how is one to tell how long that horse has been lame? It is always difficult to tell a magistrate if a horse came out sound; if he was lame yesterday, and so on. The same difficulty arises in cases of ringbone, etc.

The President (Captain J. R. Hewer): I also should like to thank Professor Macqueen for his very interesting remarks; it always was, and always is, a pleasure to listen to him. (Applause.) There is one comment I should like to make, arising out of Major Kirk's remarks about corns, and that is that, in my opinion, there is no doubt that lameness is sudden in onset. One case is very definitely in my memory. It was a hunter ridden by an Army officer. He had hunted this horse all day and rode the animal home sound. Half an hour afterwards the horse developed sudden lameness, and I was sent for and informed that it was believed that the fetlock joint was dislocated. I searched the foot and found a festered corn to be the origin of this sudden lameness, there being a fair quantity of pus present.

The Reply.

Professor James Macqueen: I thank you very sincerely for the very kind way in which you have received my remarks, and also for the very complimentary manner in which you have spoken of my effort. It is a pleasure to renew acquaintance with old students, and some of you gentlemen are so distant as students—with regard to years, of course—that I must say I could scarcely recognise many of you, but when a name is mentioned I can nearly always recall the initials. (Laughter.)

With regard to the questions, beginning with those by Mr. Male: He asks whether navicular disease is common in the young horse. It is not common, but it does occur sometimes, and you may see it as early as the second or third year. Those horses usually exhibit well-marked

alteration in the shape of the foot. Mr. Male does not agree entirely that navicular arises from work on hard roads, but I base my statement regarding this cause upon my experience of the time when cab horses were used commonly in London, and cab horses constituted the large majority of navicular cases. Then he asks me how to distinguish between navicular disease and low ringbone—ringbone affecting the pedal joint. I should say that attention to the action of the horse is of considerable help in distinguishing the two conditions. I cannot agree with him that the action in the two conditions is identical. There is a difference, and the peculiar setting of the foot on the ground ought to indicate that the cause is not navicular disease. There is a further distinction in that in coffin joint ringbone the lameness is continuous and the modification that one expects to see in cases of navicular disease is not shown in cases of low ringbone.

As to the treatment of flexor metatarsi lameness, some of these cases are incurable, others are not, but my experience is that no special treatment is required. Resting the horse for six weeks in a large loose box sometimes succeeds; it may be said to succeed in a considerable percentage of cases, but I have met with cases that were not improved after a rest of two or three months and occasionally it was found necessary to destroy the horse as incurable.

Mr. Male also asked whether thickening of the annular ligament should be called a curb. If it forms a prominence on the posterior line of the hock it should be referred to as a curb, because sometimes there is a thickening of the annular ligament which is very similar to curb and not easily distinguished from strain of the metatarsal ligament. Should one refer to the enlarged head of the external metatarsal bone as false curb, or simply as curb? I would call attention to the existence of a prominence at the seat of curb. In practice, the only safe way is to call it a curb, because until the leg is dissected you will not be able to say whether or not the prominence is due to strain of the ligament or to an enlargement of the head of the bone.

Mr. Sargent said that most cases of laminitis are prodcued by congestion of the blood supply of the foot. I quite agree that in all cases of laminitis there is congestion of the blood vessels as an early change in the foot, and in some cases the horse recovers in the course of three or four days. He also mentioned that septic foot in laminitis is uncommon; so it is, but now and then in an acute attack of laminitis affecting all four feet the fore feet may escape septic infection, while both hind feet may suffer. Always look out for septic infection if the symptoms are prolonged beyond ten days. Mr. Sargent also said that curby hocks tend to cause lameness at the fetlock. I respect his statement, but I must say that I have had no experience of any cases of the kind.

Captain Winter does not believe in heredity in laminitis, but that dietetic laminitis is very common, and he further remarked that when one advises rest for any condition, that advice is not always appreciated by the client. I think that is quite true; the client has to be educated, as Mr. Armfield suggests, but it is not easy to have the double duty of attending the case and educating the client.

Major Taylor asks if laminitis is contracted on board ship. It must be remembered that a single horse taken out of work and put on board ship to travel perhaps thousands of miles is very liable to contract laminitis if weather conditions are such as to preclude exercise. But it is a remarkable fact that when horses were shipped in large numbers from the United States to this country for the tramways they arrived and were discharged on the wharf without showing any signs of laminitis. Laminitis was not the trouble, the usual troubles were nasal catarrh and strangles.

One very wise remark has been made this afternoon, namely: "Experience makes one cautious in diagnosis." I was going to say the same thing, but I can amplify these words by saying that I have been over 50 years in practice, and have seen lame horses every day, except Sunday, during that time. Occasionally I have come to a conclusion with regard to the symptoms of a lameness, and when about to commit the particulars to paper another case of a similar kind has upset my conclusion and caused me to revise my views. I cannot say that I have reached finality with regard to the diagnosis of any lameness. Each case should be taken on its merits and examined as carefully as if it were a first case: there is no better way. Several members have favoured dietetic laminitis, and expressed the belief that there is an hereditary tendency to the disease; also that navicular disease is an hereditary complaint. The present view amongst horse breeders, and that held to a very large extent by the veterinary profession, is that navicular disease is hereditary. There is some doubt as to whether laminitis is actually hereditary or not; it is not recognised as an hereditary disease. But a mare that has recovered from laminitis may be put to breeding, and after foaling, although she may have had an easy foaling, she contracts an acute attack, but I cannot say that that indicates any connection with heredity.

Mr. Little expressed some doubt as to dietetic laminitis. I recognise dietetic laminitis, but what I say is that every case in which there has been some abuse of dietary is not followed by laminitis; besides, there is no satisfactory explanation forthcoming of how indigestion, or engorgement of the stomach with certain foods, causes laminitis. He also asks how external popliteal paralysis can be distinguished from stifle lameness. Viewing the animal standing (as in the diagram I showed you) the position of the limb suggests that the horse is suffering from gonitis, but in popliteal paralysis the movements of the fetlock and pastern are quite different from those shown in stifle disease.

Major Kirk mentioned a case of dietetic laminitis in a newly-purchased horse. I suppose that happens sometimes; it may be a mere coincidence, or it may be an example of cause and effect. Does lameness due to corn arise suddenly? In cases of simple corn there may be no lameness in the preliminary stages, but there comes a stage in which lameness is suddenly produced. He asks, can one fix the duration of a case of tendon lameness, or how long a ringbone case has been lame? I say that no one can positively estimate the duration of lameness in any case, by looking at the horse. I have never ventured to join that class whose members maintain that they can correctly estimate the duration of lameness or of any disease. It is impossible to be accurate on any question of the kind, though on occasion one may hazard a guess.

My last word is to thank you for your reception of me to-day.

The Horse-breeding Position.

"Stallions are now on their rounds. It does not appear that there is any marked increase in the numbers of entire horses of any breed hired, and the heavy breeds are only holding their own. In connection with Clydesdales the most noteworthy feature is the failure during the past few years of the export trade to show any marked evidence of revival. Geldings of the breed are in great favour for spectacular purposes in Canada and the United States, but somehow that does not seem to have any marked effect upon the breeding of Clydesdales or the demand for export. In the case of Shires the home trade has shown signs of improvement, but the depression has been deep, and there is no export trade. In so far as the home market is concerned, Suffolks within their orbit or ambit enjoy as great prosperity as either of their rival breeds. Percherons have made little headway in territory occupied by Shires or Clydesdales, but, strange to say, they are in favour as competitors with the Suffolk. It is idle to rub in the undoubted decline in the breeding of the great coaching and driving breeds, the Cleveland Bay, the Yorkshire coach horse, and the Hackney. The Hunter has, if anything, improved his position, and the thoroughbred naturally shares in this popularity. Ponies of every class are still a profitable item."—*The Scottish Farmer.*

The Nature of Lambing Sickness.*

By Professor J. Russell Greig, Department of Medicine Royal (Dick) Veterinary College, Edinburgh.

During the last ten years considerable attention has been directed by British veterinarians to the nature of certain diseased conditions incidental to pregnancy and parturition in the ewe.

In Scotland, at least two such conditions have gradually become recognised as distinct clinical entities, although their possible pathological relationship has been a matter of conjecture.

The diseases referred to are known as :—

(1) Pregnancy toxæmia ; pregnancy disease of ewes ; ewe paralysis ; twin trembling ; moss ill ; white liver ; preparturient eclampsia of ewes.

(2) Lambing sickness ; ewe distemper ; milk fever.

In order to avoid confusion the diseases will be referred to here as " pregnancy toxæmia " and " lambing sickness " respectively.

It is the purpose of this paper to indicate the nature of lambing sickness and to establish its identity with milk fever in the cow. There is also offered evidence by which the affection may be distinguished from pregnancy toxæmia.

Pregnancy Toxaemia in Ewes.

Pregnancy toxæmia in ewes appears to have a wide distribution. Thus Gilruth describes it in New Zealand(1) ; Luckey(2) ; Hadley(3) ; Newson(4) ; Frey(5) ; Dimock, Healy and Bullard(6) ; Marsh(7) record the disease from various parts of the United States ; while Bruce(8) reports it from British Columbia. There are several records of its occurrence on the Continent of Europe, particularly in Hungary(9).

In this country M'Fadyean drew attention to the malady in 1924(10), and four years later(11) Gaiger recognised the affection as widespread in Yorkshire, Lancashire and Cheshire.

My personal experience of the disease is limited to Midlothian and the Border Counties of Scotland, where its incidence has markedly increased in recent years.

The disease appears to be confined to ewes during the last few weeks of pregnancy. Plethora is to be regarded as a predisposing factor, while the practice of heavily feeding concentrates, or alternatively, of suddenly changing the grazing ground from poor to relatively rich pasture, also increases the susceptibility to attack. In a large proportion of cases the ewe is pregnant with twins.

Symptoms.—The affected ewe separates herself from the flock. There is much depression of spirits. The head is carried in an unnatural position—it droops, is held to one side or carried very high, in which case there is usually disinclination to move. The gait becomes staggering and uncertain and, later, there is marked disturbance of vision and even apparent blindness, so that locomotion becomes blundering and erratic.

The appetite is almost completely lost and the intestinal peristalsis is sluggish if not entirely suspended. Fine tremors appear over the head and neck and may become general. The temperature is approximately normal.

* Received for publication, May 21st, 1929.

In the course of a few days the ewe is found unable to rise ; she lies quietly ; sensibility is obviously dulled ; tympanites may be extreme and is accompanied by involuntary regurgitation of ingesta from the nostrils.

Finally the animal becomes progressively comatose and death usually results in the course of one to six days. The mortality approaches 90 per cent.

On autopsy, fatty infiltration of the liver is invariably present. This condition is frequently found in healthy parturient ewes, but is particularly evident in the disease under discussion.

Dimock, Healy and Bullard (*ibid*) in a study of the urine analyses of 11 cases found that the urine is acid, contains a precipitate (presumably urates), acetone, albumen and a markedly increased quantity of ammonia.

In three cases an examination of the blood revealed a marked fall in the alkali reserve. They therefore concluded that pregnancy toxæmia represents a condition of acidosis, and suggested the name " Acidosis of pregnant ewes."

In three cases examined I was able to confirm the presence of acetonuria and, as a supplement to the work of Dimock, Healy and Bullard, I endeavoured to determine the blood calcium values which obtain in the disease.

In an examination of 22 normal sheep, of which five were parturient ewes, the following results were obtained :—

	Mgms. Calcium %
Maximal figure	11·92
Minimal figure	7·92
Average figure	10·96

It has been found that there obtains a much wider normal calcium range in the sheep than in the cow, but the majority of the values fall within 9 mgms. and 11 mgms. per cent.

Six cases of pregnancy toxæmia were examined and gave the following readings :—

	Mgms. Calcium %
Maximal figure	10·72
Minimal figure	8·23
Average figure	9·41

It will be observed that the calcium values in pregnancy toxæmia are clearly within the normal range.

Treatment.—No curative treatment of any value is known. Mammary inflation has been repeatedly tried, but without any beneficial effect. It has been noted that in those ewes which have lambed during the course of the disease, rapid recovery followed parturition.

Prevention.—American observers claim that the incidence can be greatly reduced by exercise (driving the ewes slowly but continuously over a distance of two or three miles daily). In this country the most practical means of prevention consists in reducing the food of the ewes that have not yet lambed to a bare subsistence limit.

In my experience the adoption of this procedure, which was strongly advocated by M'Fadyean, has immediately cut short several extensive outbreaks of the disease.

Discussion.

The apparently constant acetonuria and the observed acidosis suggest an investigation of the blood glucose concentration as a fruitful line of enquiry. A series of controlled observations on the therapeutic effect of injections of glucose and insulin as a means of indicating the origin of the ketosis further suggests itself.

Lambing Sickness.

Since 1903, when Hewetson(12) first drew attention to a peculiar affection of lambing ewes which resembled milk fever in the cow, the disease variously known as "lambing sickness," "ewe distemper," "milk fever," has become generally recognised over large areas, especially in the Midlands and North of England and in the Border Counties of Scotland.

References to the disease in veterinary literature are few, Cundell(13), Walpole(14), Masson(15), Armstrong(16), Gunning(17), and this may be partly accounted for by the comparative rarity with which veterinary practitioners are called upon to undertake the treatment of sporadic cases of disease in sheep.

Shepherds, too, have learned that inflation of the mammæ is rapidly followed by complete cure, and they themselves commonly practise this treatment.

There has been much speculation as to whether milk fever in the cow, and lambing sickness should be regarded as representing a single pathological entity. They are similar in their time relationship to parturition, although lambing sickness not infrequently appears shortly before lambing, and is also commonly encountered in ewes with young lambs at foot. Cases also occur in ewes in advanced lactation, especially if grazed on strong pasture. Similarly so-called "delayed milk fever" may attack non-parturient, lactating cows which have been run on succulent pasture, and it has been noted that such animals are specially susceptible to attack during œstrum—a fact which may be correlated with the known influence of ovarian secretion in lowering the blood calcium.

The clinical symptoms of lambing sickness and milk fever in the cow also present much similarity, and the response to mammary inflation is common to both; but since the pathology of neither was known their relationship could only be suspected.

Upon its becoming evident that milk fever in cows was invariably associated with an acute hypocalcæmia(18), I resolved to determine the calcium values which obtained in lambing sickness.

Very great difficulty was experienced in obtaining material, but I have been able to examine the bloods from five cases.

A summary of the analyses is set out in the following table:—

	Mgms. Calcium %
Maximal figure	5.94
Minimal figure	3·51
Average figure	4·40

It will be observed from the above figures that an acute hypocalcæmia is present in lambing sickness.

In three cases the effect of mammary inflation on the blood calcium has been observed:—

Case No.	Remarks.	Mgms. Ca %
2	Before inflation, comatose	3·52
	Two hours later, apparent recovery	7·05
	Fifteen hours after inflation, normal	7·17
	One week later, complete recovery	9·69
3	Before inflation, semi-coma ...	4·35
	Twelve hours later, normal ...	6·71
4	Before inflation, deep coma, collapse, "apparently at the point of death"	3·51
	Two hours later, "quite lively, running about freely"	7.73
	Fourteen hours after inflation, "quite normal"	7·82
	One week later, complete recovery	9·80

The rapidity with which recovery follows mammary inflation can properly be described as amazing, and the concurrent rise in blood calcium is no less remarkable.

In Case No. 4 the collapse was so extreme that, upon a cursory examination, the ewe was at first believed to be dead.

In one case (No. 1) the practitioner in attendance, Mr. Oscar Stinson, obtained a rapid recovery by means of a subcutaneous injection of calcium gluconate(19).

Discussion.

Apart from the similarity between milk fever in cows and lambing sickness, in their conditions of occurrence and in their clinical manifestation, the acute hypo-calcæmia which obtains in both diseases and the intimate relationship which exists between the progressive rise in blood calcium and the corresponding and concurrent disappearance of the symptoms which follows the mechanical distension of the mammæ, justifies the conclusion that lambing sickness and milk fever in cows may be regarded as identical in their essential pathology.

In an examination of 100 cases of various diseased conditions (68 in cattle, 32 in sheep) the calcium values have been found to be either normal or somewhat diminished. In no case, so far examined, has there been found a hypocalcæmia in any way comparable to that which occurs in milk fever in cows and lambing sickness in ewes.

There is no doubt that very large numbers of cases of lambing sickness are not recognised as such and are allowed to die.

That an acute and pronounced hypo-calcæmia is the prevailing factor in milk fever may now be regarded as established, but it is reasonable to suppose that so great an upset in the mineral balance as must be occasioned by the sudden fall of calcium must result in severe disturbances in general metabolism, which have their reflex in the complicated milk fever syndrome.

Acknowledgements.—I am gratefully indebted to the following gentlemen for assistance in obtaining material:—Mr. N. Bisset, Mr. A. Edgar, Mr. O. Stinson, Mr. H. B. Allan and Professor S. H. Gaiger.

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The above paper forms part of a general investigation on milk fever which the author is prosecuting in collaboration with Professor Henry Dryerre and Dr. N. C. Wright, by the aid of grants received from the Development Commission, and the Highland and Agricultural Society of Scotland.

WORLD'S JERSEY "RECORD."

Major T. R. R. Hoggan writes from Vaucouver, B.C. :—"I enclose herewith newspaper cuttings which may be of interest to the profession, as Dr. M. L. Olsen, of Duncan, Vancouver Island, is a member of the B. C. Veterinary Association, and we are naturally pleased that one of our members has been able to make a world's record."

The cuttings relate, with photographs, to the two-year-old Jersey heifer, La France's Princess—36761—owned by Dr. M. L. Olsen, Duncan. She has just completed a record that makes her the highest-producing Jersey in the world for her class in the 305-day division.

Starting test at two years and 355 days, this young cow produced in ten months 14,481 pounds of milk and 729 pounds of fat, with an average test of 5.03 per cent. fat.

"Full details of the test are not yet to hand as the certificate will not be issued until this heifer freshens again. The foregoing figures are, however, correct and show that the production exceeds the previous world's record for that class by 3,033 pounds of milk and 70 pounds of butterfat. As soon as La France's Princess has calved, which should be early this month, she will be awarded the Gold Medal certificate of the Canadian Jersey Cattle Club.

"The record just completed was made with her second calf. With her first calving at one year and 355 days she made 10,778 pounds milk and 573 pounds fat in 305 days. This record was the highest ever made in Canada by a senior yearling.

"La France's Princess was born on May 11th, 1925, and was bred by A. E. Collyer, of Chemanius, her sire being Sultana's Owl, of Ferndale—19866—and her dam Birdie La France of M. L. P.—2887—. She was sold as a calf to Dr. Olsen, who developed her in both records."

REVIEW.

["The Law relating to Medical, Dental and Veterinary Practice." By FRED BULLOCK, LL.D., Barrister-at-Law. London: Ballière, Tindall & Cox; and Stevens & Sons, Ltd. 8vo. pp. 317. 12s. 6d.].

A knowledge of the relationship between the practitioner of medicine and the law is of vital importance to everyone who has anything to do with the art of healing. The qualifications necessary to practice, the rights, privileges and duties of both qualified and unqualified men, the discipline exercised by the controlling authorities and the effects of negligence are matters which each and all of us must know.

A certain amount of information on this subject has hitherto been easily available—the bye-laws of the Royal College and similar institutions, reports of cases and prosecutions in the professional press and the lessons taught in the hard school of experience—but much has been difficult to find and obscure to understand. This has now been remedied by the appearance of Dr. Bullock's new book on the Law relating to Medical, Dental and Veterinary Practice.

This is not a text-book of jurisprudence or forensic medicine. It is a hand book of law relating to the practitioner himself, not to his art. In an introductory chapter attention is drawn to the present anomalies in the law—more especially to the continued existence of unqualified persons both in medicine and veterinary surgery, and to the necessity for new legislation. The unqualified dentist is now a thing of the past. The history of the legislation controlling medical practice shows that one of the greatest evils in the way of improved public health has been the ubiquity of quackery, and no attempt to prohibit it has ever been effectual until the recent legislation relating to dentistry. The hope is expressed that, should this new dental legislation prove satisfactory, the other professions may be able to follow this example.

The next three chapters sketch the development of the control of medicine and surgery by the rival activities of physicians, surgeons and apothecaries, and chapter five brings this story up to date. Chapters six and seven trace the similar developments of legislation governing dental and veterinary matters. Subsequent chapters discuss the varying nature of the jurisdiction of the Privy Council over these professions, the questions of professional discipline, "quacks," recovery of fees and negligence.

While the whole volume is immensely interesting to the veterinary surgeon, chapters seven and eight and part of eleven most intimately concern him.

The first of these deals with the organisation of the veterinary profession subsequent to the establishment of the London College in 1791. In it is traced the development of the schools, and the "one-portal" system, and the attempts made to suppress "quackery" and to consolidate the position of the Royal College of Veterinary Surgeons.

The second, considering the jurisdiction of the Privy Council, not only discusses the jurisdiction of that body over our profession, but points out the anomalies in the statutory definitions of the terms "veterinary surgeon" and "veterinary inspector."

XUM

In the third of these chapters—that concerning unqualified practice—the whole position of the law in relation to "quacks" is reviewed, and important suggestions for reform are indicated.

Not only has Dr. Bullock expounded with a unique authority the law as it affects the veterinarian: he has applied to that exposition the new methods of Comparative Medicine. Visualising the healing professions as a whole, he has collated the information concerning the legal positions of all concerned with medicine *sensu latu*. The principles governing all these professions are essentially similar and have as their ultimate aim the protection of the public. He has shown the drawbacks in the regulations controlling one body by pointing out the advantages of another: and in this way prepared the way for those necessary revisions which will ensure the most complete protection of the layman with the least interference with the privileges of the professions. The present position of the law cannot be regarded as final by even the most superficial student, and this clear account of the existing state of affairs and of the events which have given rise to it must do much to promote those so obviously essential reforms.

Dr. Bullock has performed an excellent piece of work. Not only does his book provide a new outlook to all the medical professions, but it shows how essentially similar they are, and helps in a most unexpected manner to strengthen the bonds of union between them which in recent years have been so strikingly re-forged. He has, moreover, succeeded in clothing the dry bones of the law, and made that often dead subject really live. His tremendous energy and his unrivalled knowledge of his subject have long been known to the veterinary profession, and we are glad that he has had this opportunity of extending his reputation to a much wider—though not more appreciative—public. There is no other book on the market which approaches the value of this one for medico-legal purposes, and it should find a place in the library, not only of every institution concerned with the teaching or administration of the medical sciences, but of every practitioner of their arts.

T. W. M. C.

The Journal of the Royal Army Veterinary Corps.

The Committee of Management of the *Journal of the Royal Army Veterinary Corps* acknowledge with thanks receipt of subscriptions to that publication, from the undermentioned:—

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The Veterinary Record.

15th June, 1929.

DR. FRED BULLOCK, LL.D., Barrister-at-Law.

With the publication of his book on "The Law relating to Medical, Dental and Veterinary Practice," a review of which appears in our issue of this week, we take unto ourselves a special pleasure and pride in extending to the author the appreciation of a profession for all that he has done, and is doing, in the furtherance of its well-being and progress. Dr. Bullock has now been the excalibur of the Royal College of Veterinary Surgeons administration for twenty-two years, and it is the devout wish of that body and of the whole profession governed by it, that an association so happily begun and so profitably continued, may endure for many long years to come. Born in 1878, educated at Stafford Grammar School and the Université de Caen (Diplôme Supérieur de langue Francaise), Chief Clerk in charge of the Higher Education Department under the Staffordshire County Couucil for ten years, County Council Inspector of Commercial Evening Schools, 1900-7, French Master, County Technical School, Stafford, 1902-7, Founder of Cercle Francais de Stafford, and a member of the Modern Language Association, his educational attainments and experiences were an asset in guiding the Council of the Royal College of Veterinary Surgeons in their selection of him as Secretary and Registrar of that body in 1907.

On his appointment a promise of faithful service was then made which has never showed a diminution or a wavering throughout the many years of duty, and its significance may be best summed up in Dr. Bullock's own words on the occasion of the presentation of a silver tea and coffee service in July, 1927, by the President and Council of the R.C.V.S.:—"With all my heart, soul, mind and strength, I intend to carry out that promise, and if it should be my good fortune to serve you for another ten or twenty years, I hope to do my share so that the profession may go on with increasing momentum until all of us are satisfied with the position which the profession holds in the service of the public." It is on such whole-hearted devotion that success, both private and public, depends, and whatever advancement Dr. Bullock has made in private life, the honour of it is shared by, and reflected on, the profession which he has served so steadfastly. Even his studies at Law, the passing of his Intermediate LL.B. in 1924, with Honours in Jurisprudence, Criminal Law, and Constitutional Law, his final LL.B. in 1926, with 2nd class Honours, at King's College, London University, his "call to the Bar," Grays Inn, in 1926, with 1st class Honours in Law of Real Property, Part I. examination, and 8th in order of merit in Part II. examination, and finally his higher Law honour of Doctor of Laws (LL.D.), all centre round our profession and are intended to serve its purpose. For this reason he selected as his Thesis for his Degree of Doctor of Laws, the subject of "The Law relating to the Medical, Dental and Veterinary

FRED BULLOCK, LL.D., F.C.I.S.,
Secretary and Registrar,
Royal College of Veterinary Surgeons.

Practice," which, it is safe now to say, will become a standard work. For the same reason, too, he brought out the "Handbook for Veterinary Surgeons," in 1927. Added to these are his useful and interesting contributions of "Notes on the early history of the Veterinary Surgeon in England," presented at a meeting of the History of Medicine Section, Royal Society of Medicine, in 1929, and *The Mulomedicina Chironis*, contributed to the *Journal of Comparative Pathology and Therapeutics*. He has of times presented papers and taken part in discussions on points of good order and discipline at our local Divisions of the N.V.M.A., and lastly, but by no means of least importance, he has been closely engaged with Major-General Sir Frederick Smith in that stupendous work on the history of Veterinary Literature, which awaits completion and publication. Sir Frederick Smith tells us that until he arrived at a period in his History when works were published in English, he had to be dependent on others, and especially Dr. Bullock, for a knowledge of the views of the various writers. Without this great help, he says, his work could not have been so complete.

Dr. Bullock's knowledge of libraries, of information bureaux and the consequent interest he took in the foundation of our War Memorial Library, of which he is Librarian, in addition to his other duties, has done much to make for the success of that useful addition to the Royal College of Veterinary Surgeons.

But with all these attainments he would prefer to sink individuality and instead would stress the importance of his office for our common good. The administrative task of the Secretary, Registrar and Librarian of the Royal College of Veterinary Surgeons is a difficult one. It can be said with truth that he has never thought of his own interests, but has sacrificed much time and labour unrewarded for the good of the profession. He is faced with frequent changes in the junior ranks of the office personnel and the necessity for training others; the financial resources of the Royal College Funds are limited and strict economy militates against a fulfilment of adequate and desirable professional progress. Yet much has been accomplished in recent years; hard tasks have been cheerfully undertaken and carried through efficiently, and if professional recompense counts for anything at all, it should be directed towards lessening the work of the executive staff by a sympathetic and punctilious observance of those laws which are framed for the good government, the financial obligations and the best possible progress of the profession.

Another item of duty which will tax the organising powers of the Council, and from which much will be expected of the Secretary, is the forthcoming International Veterinary Congress, but we feel sure that it will be carried through with that customary ability which we now have learned to look for in Dr. Bullock.

And, finally, our appreciation of him would not be complete without a recognition of that inestimable power which woman can give to man. In his talented wife he has a helpmate who has shared his trials and joys since 1916, and has assisted to influence the choice of channels through which his energies have poured. She herself is a B.A. (Hons.) London, and M.A. St. Andrews, studied Law with him and obtained her LL.B. London, with Honours.

CLINICAL AND CASE REPORTS.

Fatty Degeneration of the Liver associated with Foaling in Donkey Mares.

By Major H. Allen, O.B.E., R.A.V.C.,
Remount Depôt, Mona, Punjab, India.

Case No 1. *Donkey mare.* Born 8th September, 1917. A full-time foal was born on the 29th December, 1928, and is still living.

The foal was transferred to a foster-mother on the death of the mother.

Record of mare. Three living foals, born on the 3rd December, 1923, 23rd May, 1925, and 29th December, 1928. One full-time foal born dead, on 31st May, 1926. Developed symptoms of fatty degeneration of the liver on the 12th January, 1929. Died on 18th January, 1929.

Case No. 2. *Donkey mare.* Born 29th June, 1927. A full-time foal was born on the 10th April, 1929. The foal was transferred to a foster-mother on the death of the mother.

Record of mare. Five living foals, born on the 22nd March, 1922, 20th August, 1923, 13th December, 1925, 11th April, 1927, and 10th April, 1929. One born dead, on the 15th September, 1924. Developed symptoms of fatty degeneration of the liver on the 8th April, 1929. Died on the 11th April, 1929.

Symptoms. Obstinate constipation, and slight colicky symptoms. Completely off feed. Conjunctival mucous membranes a deep yellowish red, with dark brownish petechiæ. Marked depression. Weak staggering gait. Quick pulse. Temperature normal.

Histological and Post-mortem Examinations.

The liver showed histologically almost complete destruction of liver cells by replacement with fat. It was an example of very advanced fatty degeneration, and the change was also very apparent from the naked-eye characters.

It was the one and only apparent *post-mortem* lesion, pitted easily, and was very greasy to the touch, and enlarged.

Summary.

There was apparently a definite relationship with the foaling. A similar condition of advanced fatty degeneration of the liver has been noted in England during the breeding season among ewes, which ended fatally after a short period. (M'Fadyean, Sir J.).

Extract.

Fatty Infiltration of the Liver as a Cause of death in Pregnant Ewes. (M'Fadyean, Sir J.). *Jl. Comp. Path. and Therap.* 1924. Vol. 37, pp. 287-293).

This disease appears to be quite common in Great Britain, but evidence is lacking as to its existence in other parts of the world. How the disease is caused is not yet definitely known, but M'Fadyean suggests that it may be due to excessive fattening of ewes, specially during the later period of pregnancy.

Symptoms.

General symptoms noticed are excitement, trembling, dulness, refusal of food, constipation followed by diarrhœa, and disturbance of vision or total blindness.

One remarkable thing which is noticed is that almost all attacks are amongst pregnant ewes, and it makes its

appearance at any time between two and four weeks before lambing.

Post-mortem reveals nothing except fatty infiltration of the liver.

Treatment (Preventive):—

M'Fadyean recommends regulating the diet, particularly during the last month of pregnancy.

Neale records a number of cases in Shropshire sheep, which ended fatally after a short illness, and in which the only lesion found at the *post-mortem* was extreme fatty infiltration of the liver (Hutyra and Marek, Vol. II. pp. 432-433. 1926).

Occlusion of Lachrymal Duct.

By Lieut.-Colonel W. H. Walker, D.S.O., O.B.E., R.A.V.C.

Perusal of an article by Captain J. F. Dornblaser, V.C., in the *Veterinary Bulletin* of the Veterinary Corps, U.S. Army, on "Occlusion of Lachrymal Duct by Wild Oats," prompts me to record a somewhat similar experience. Three years ago a hunter was shown to me as suffering for many months from a chronic muco-purulent discharge from one eye, accompanied by a certain amount of conjunctivitis, which failed to respond to simple treatment.

With a view to determining if the lachrymal duct was clear, it was flushed out from the nasal opening with water. An ordinary brass wound syringe was used, to which was attached a piece of rubber tubing with a nozzle made of a fine-bore glass tube; this was easily passed into the lower portion of the duct.

On injecting the water, at first there was a noticeable resistance, quickly followed by the expulsion from the optical opening of a piece of macerated straw about five inches long. The case cleared up at once. How the straw could have got in was rather a mystery, but the only conclusion I came to was that it had entered whilst the horse was nosing about the bedding.

Puerperal Convulsions in Cats.*

By Capt. Seth C. Dildine, U.S. Army Veterinary Corps.

The writer having never seen a case of puerperal convulsions described in his American text books on small animals, nor in the current veterinary journals, it was thought that it might be of interest to describe the following case:—

The patient was an ordinary female cat which the owner thought would soon be dead, and which I also thought would die in a very short time, as she was showing symptoms thought to be those of strychnine poisoning. The owner was asked whether he had strychnine or any other poison in the house, and he informed me that there was none. He was then asked if the cat had been out of the house, and he said that she was out a short time, but was always in sight, and did not eat anything.

Further questioning revealed the fact that the cat had a litter of kittens to which she had been supplying an abundance of milk for the last eight weeks. That evening she had eaten a good supper and had been with her kittens. About 9 p.m. it was noticed that she was very uneasy, a little stiff and unsteady behind. This condition kept getting worse until 1 a.m. When the writer arrived the cat was stretched on her side, and was showing typical strychnine poison spasms. In a few minutes she seemed to be relaxed and tried to stand on her feet. Upon trying to examine her she immediately stiffened out as previously described. Upon the slightest examination it was noted that the muscles were hard and tense, the heart was very fast, small and hard, and that the mucous membranes were congested.

The body felt warm, especially the mammary glands, and pressure on them seemed to cause pain. There was an anxious look on the face, the eyes were open, and the corneal reflex was present. She seemed to be able to understand commands, but was unable to obey them. The spasms appeared to be getting harder and closer together.

Having come to the conclusion that it must not be poison, and because the symptoms corresponded so closely with puerperal convulsions in bitches (so-called eclampsia) which the writer has treated, it was decided that the cat had puerperal convulsions.

Treatment. The cat was placed in a quiet place and given cannabis indica to control the spasms. As soon as the spasms were allayed, a tablespoonful of milk, with all the sugar it would dissolve, was fed. Milk and sugar was kept before her for two days. The kittens were immediately removed and weaned. In twenty-four hours she was apparently normal, and has been normal to this date.

If any more cases of this type are encountered a 5 per cent. solution of glucose subcutaneously in 5 to 10 c.c. doses will be used, as very good results have been claimed for its use in eclampsia in bitches.

A request was made to the Librarian, S. G. Library, Washington, D.C., for any literature they might have on puerperal convulsions in cats, and they immediately sent a book on "Diseases of the Cat," by J. Woodroffe Hill, which describes "Puerperal Fits or Mania," as follows:—

"Occasionally, as in the bitch, these occur soon after parturition, probably due to some abnormal condition of the nervous system arising from septic influence. The cases which have come under my notice have occurred in young cats after their first parturition.

"Symptoms. Unusual restlessness is manifested, associated with entire suspension of milk or a very scanty secretion. The animal has a wild unnatural expression, similar to that observed on recovering from an epileptic seizure. The least noise creates alarm, and handling the subject increases its excitement.

"The young are either ignored, mangled or devoured. Suddenly the animal becomes rigid and falls over flat on its side. The fit quickly passes off if no interference takes place, but recurs if any alarm is occasioned. The pulse is rapid, the tongue purplish and furrowed, and the skin unusually hot.

"The bowels may be torpid, but more frequently the opposite, with frequent evacuations.

"Treatment. Removal of kittens. Administration of 5 gr. doses of bromide of potassium, subcutaneous injections

* U.S. Army Veterinary Corps *Bulletin*, Vol. XXIII., No. 5.

of morphia, and in severe cases 5 to 10 grains of chloral hydrate.

"Diet. When able to take it without excitement, brandy and milk, and raw meat juice. If constipated, enemas."

The symptoms shown in this case correspond very well with the description of Puerperal Convulsions in Bitches, by Hutyra and Marek, and Eclampsia in Bitches, by Dr. O. V. Brumley.

References.

"Diseases of the cat," Hill.

"Diseases of Small Domestic Animals," Brumley.

"Pathology and Therapeutics of the Diseases of Domestic Animals," Hutyra and Marek.

ABSTRACTS.

[Susceptibility of the Guinea-pig to the Virus of Foot and Mouth Disease. RINJARD, P. Sur la Réceptivité du Cobaye vis-a-vis du virus aphteux. *Compt. Rend. Soc. de Biol.*, 1929, April, T. 100, No. 12, p. 974.]

It is generally recognised that the adaptation of certain strains of foot-and-mouth virus to the guinea-pig is a matter of considerable difficulty. It is highly probable that the failure to obtain infection in a proportion of guinea-pigs which are inoculated with fully virulent strains, is dependent upon the non-receptivity of individual animals. This variability is of greater significance when a strain, whose virulence has been debased, is being used. An experiment is described in which fragments from cattle vesicles were immersed in glycerinated phosphate solution (PH. 7.6) for 24 hours and were then inoculated into two cattle and four guinea-pigs. Twenty-four hours later, the cattle showed vesicles at the point of inoculation, but the guinea-pigs failed to present lesions until the 48th hour, and then in two only. Material from the primary bovine lesions was inoculated into four guinea-pigs and gave rise to well-marked lesions in three at the 24th hour. Hence, after a short period of conservation in glycerinated phosphate solution, the period of incubation was doubled.

Some experiments were also undertaken in an attempt to reduce the natural resistance of the guinea-pig. A group was sensitised against bovine albumen by the intra-peritoneal inoculation of 0.1 cc. of inactivated bovine serum. Fifteen days later, when they were in a state of anaphylaxis, two of these guinea-pigs, together with six controls, were inoculated with a feebly-pathogenic virus. The sensitised guinea-pigs became infected, whilst the controls remained unaffected. The virus was successfully passaged through sensitised guinea-pigs and at the fourth passage was still incapable of infecting normal guinea-pigs.

R. E. G.

[Autovaccination in the Lung Form of Distemper. MGLEJ, S. (1928). *B.T.W.*, 44, 34, 557-560. (From the Veterinary High School of Lemberg.)]

In the author's opinion the lung lesions of "distemper" dogs are due to bacteria which are found normally in the air passages and develop as a result of decreased vitality, this being produced by Carre's filter-passing virus.

The variety of the microbes present in individual dogs accounts for the failure of many of the vaccines used in the past.

The author made his vaccines as follows:—The nasal region is thoroughly cleaned and washed with alcohol-ether. The dog is then induced to cough by pressure on the throat. Fresh discharge is thus brought to the nose and this is sown on agar. The resulting growth is washed off in saline and the suspension of germs killed by heating at 60° C. for one hour. The vaccine so prepared, containing 100-150 million bacteria per cc. is injected subcutaneously in a dose of 1.0-2.0 c.c. Injections are repeated at 2-4 day intervals; as a rule they are borne very well.

The author has experimented with this type of vaccine on 14 dogs, 12 of which had severe lung symptoms and two of which were in the commencing stages of the disease.

It would appear that two or three injections of vaccine spread over a period of 4-14 days are of use in effecting a cure. The vaccine treatment is valueless where bowel complications are present. Medicinal treatment must be relied upon in this case.

REPORT.

[Southern Rhodesia. Report of the Director of Veterinary Research for the year 1928. pp.13. Printed by the Govt. Printer at Salisbury, Rhodesia, 1929.]

The year 1928 seems to have been a season of enjoyment of long-deferred and well-earned leave for most of the staff; consequently, the Director of Veterinary Research, Mr. Ll. E. W. Bevan, M.R.C.V.S. has nothing new of outstanding importance to relate.

Nevertheless, there is some interesting reading in Mr. Bevan's painstaking recapitulation of past work, with reference notably to horse-sickness, redwater, gall-sickness, trypanosomiasis and bovine infectious abortion. We are reminded, concerning horse-sickness, that the mortality has been reduced from a former 50 to 75 per cent. to the present rate of about 1 per cent. That is to say, the mortality from horse-sickness among 295 inoculated horses of the police during 1928 was about 1 per cent. Mr. Bevan does not tell us whether so low a rate of mortality exists among the horses owned by settlers, or whether the reduction in mortality is solely due to inoculation, but it may be assumed from his observations that the loss of animals from horse-sickness in Southern Rhodesia is now negligible, and that he attributes this happy result chiefly, if not entirely, to inoculation. Efforts to discover a virus vaccine for the inoculation of cattle against redwater and gall-sickness are being continued; it would seem that complete success has not yet been reached in the war against these diseases. One gathers that stockowners are inclined to neglect inoculation and rely entirely upon the protection given by dipping and that Mr. Bevan considers that there is grave danger in such reliance. He says: "In the days before the inoculation process was discovered more than 75 per cent. of imported stock succumbed to these diseases (redwater and gall-sickness) and there is reason to believe that even at the present time the mortality would be little less."

XUM

It is not quite clear what Mr. Bevan means by the concluding words of this quotation. He may mean that even with all the dipping the mortality among uninoculated cattle would be 75 per cent.; if this is not his meaning, it is difficult to understand exactly what is meant.

Dipping is, of course, directed against the tick and consequently against all the tick-borne diseases, including East Coast fever as well as gall-sickness and redwater. We know how successful dipping has been in the elimination of East Coast fever, consequently it is hard to understand why "even at the present time the mortality would be little less" from gall-sickness or redwater.

The observations upon trypanosomiasis are especially interesting; in fact, this section forms what amounts to a first-class thesis upon the disease as it affects cattle in Southern Rhodesia. The history of trypanosomiasis in that country is summarised from 1865. We are reminded that in those olden days more than half of Southern Rhodesia was infested by the tsetse fly. There has been a great reduction, however. "At the present time between 10,000 and 20,000 square miles are invaded by this dangerous insect which, moreover, exhibits a tendency to return to its old haunts."

Mr. Bevan further reminds us that he was first in the field in introducing a form of treatment by means of alternating doses of antimony and arsenic. "Later it was found that it was the antimony which was the most important element in the treatment and to this day that drug has not been surpassed as a remedy for trypanosomiasis in cattle."

The Director of Veterinary Research gives many examples to illustrate the difficulties that arise in making animals resistant to trypanosomiasis: the chief difficulty appears to be that there are so many sorts of trypansome, and although an animal may be made resistant to one strain he may yet be completely susceptible to another.

The following extract from the report indicates clearly how the tsetse-fly, with its accompanying trypanosomes, tends to disappear before what is known as "civilisation," and it presents the corollary that short of such acts of civilisation the war against the tsetse-fly and its trypanosomes can hardly succeed.

"An objection has been raised to this method on the grounds that it involves the occupation of the tsetse fly areas by infected animals, and that they will supply nourishment and infection to the tsetse fly and possibly lead to an increase in their numbers. This contention need not be taken seriously. It is probable that the fly in local areas can already obtain all the nourishment they require, not only from game, but from smaller animals, and that their numbers would not be materially increased by the introduction of cattle. On the contrary, the opening up of mines and farms, with the resultant cutting down of timber, would probably interfere with the breeding haunts of the fly, as in the case of the Hartley district, in which in 1908 and 1909 a heavy mortality occurred among cattle in the area lying between Gatooma, Golden Valley, Shagari and the railway at Hartley. A tour of investigation carried out in 1909 by Major Thornton, of the Police, and the writer, pointed to a central area of infection at a certain spot on the Surri Surri River. Shortly after, certain wood contractors took their spans right into this area, and a very heavy mortality of their cattle followed. But, as the result of the cutting down of the timber by them, and others who constructed a light railway to supply timber for the mines in the neighbourhood, the forest in this area was cleared up, and presumably the conditions necessary for the successful breeding of the fly were destroyed. Since then, notwithstanding an increasing number of cattle in the district, until recently this area has been almost entirely free from fly, except for those probably brought in from neighbouring districts. This may be taken as an example of what may be expected from the occupation and development of fly-infested areas if preceded by a detailed entomological survey and the early removal by miners and farmers of the forest in the neighbourhood of the breeding haunts of the fly. In the light of past experience it seems absurd that such an argument should have been advanced against an attempt to apply the practical lessons of the past to the opening up of the vast areas at present rendered useless by the fly. At any rate, the stake at issue is so great that further research on the lines indicated would appear to be justified."

An account is given of experiments made by Mr. D. A. Lawrence, B.V.Sc. (Research Officer) to differentiate between bovine infectious abortion and undulant (Malta) fever of man. Of these experiments the report says:—

"The foregoing experiments indicate once again the close association in this country between infectious abortion of cattle and undulant fever of man. It has been known for some time that the organisms can be easily isolated by hæmoculture from the blood of infected human subjects, and the experiments show that it also invades the general blood-stream of small laboratory animals; but it has not yet been recovered from the blood of infected cattle. Had it been demonstrated that at any stage of the disease the causal organism made its way into the blood-stream, some of the mysterious cases of human infection might have been explained. The experiments have resulted in considerable improvement in laboratory technique in connection with this disease and may lead to an increased knowledge of these diseases which may prove of great importance. They emphasise the value of, and the necessity for, the study of disease from the comparative point of view."

The report concludes with a peroration advocating a continuance of veterinary research. The arguments carry their own conviction and the last sentence of Mr. Bevan's exhortation seems to contain what must be the verdict: "Veterinary research, therefore, which at present costs less than a penny a head on the two millions of cattle in the country, may be regarded as a profitable and necessary investment." J. W. R.

Army Veterinary Service.

London Gazette—War Office—Territorial Army.

June 4th.—Maj. A. Spruell, D.S.O., T.D., retires on reduction of estabt. and retains his rank, with permission to wear the prescribed uniform (May 1st).

The Canadian cattle trade with Britain has practically ceased. Only 405 head were shipped in 1928. On the other hand, Canadian shipments to the United States in 1928 were almost double those of any year in the past six, with the exception of 1927.

DIVISIONAL REPORT.

Royal Counties Division, N.V.M.A.

Meeting at Guildford.

The decision of the Council of this Division to include Surrey within the area in which its meetings are held was fully justified by the excellence of the attendance at a meeting held at Guildford on 26th April, 1929. Moreover, a big attraction had been arranged for the occasion in the presentation by Professor James Macqueen of a paper on "A Few Lamenesses." This contribution yielded a most informative discussion, and both are reproduced at the commencement of this issue of the *Record*.

The President (Mr. J. R. Hewer, of Swindon) occupied the Chair, and there were also present:—

Members: Messrs. J. R. Baxter, R. E. C. Bullen, Capt. H. B. Collet, Messrs. John A. Craft, C. Howard, Major Hamilton Kirk, Capt. W. L. Little, Mr. G. P. Male, Lt.-Col. P. J. Simpson, Capt. D. Smythe, Major F. J. Taylor, Major R. C. Tennant, Messrs. A. E. Ward, Ernest Wilkinson, R. A. Willett, and F. W. Willett.

Visitors: Messrs. J. M. Armfield, K. I. Barlow, A. J. Beeson, D. Johnston, R. J. Sargent, D. Tennant and E. C. Winter.

Correspondence.

(1) Apologies for unavoidable absence, from Major W. A. Austin, Mr. J. Bell, Prof. J. B. Buxton, Mr. J. C. Coleman, Major G. W. Dunkin, Principal F. T. G. Hobday, Mr. C. P. Inglis, Major H. G. Lepper, Mr. T. W. Lepper, Mr. J. McKerlie, Major Graham Rees-Mogg, Major-Gen. Sir John Moore, Colonel G. K. Walker, Major F. Wall, Mr. Walter Western, and Mr. Jack Willett.

(2) From Dr. P. P. Laidlaw, returning thanks for his election as an Honorary Associate of the Division.

(3) From the Secretary of the Royal Sanitary Institute, acknowledging a communication of notification of the delegate of the Division to the July Congress of the Institute to be held at Sheffield.

(4) From the Secretary of the National Horse Association informing the Division of its election as a body affiliated to the Association, and acknowledging receipt of the Division's subscription for the current year, also enclosing the report of the Council to the Annual General Meeting.

Nominations for and Elections to Membership. Nominations for membership of the Division were received from Mr. A. J. Beeson, of the Ministry of Agriculture, Major R. J. Sargent (Guildford) and Capt. E. C. Winter (Guildford). The following gentlemen were unanimously elected as members: Mr. C. Howard (Dorking), C. P. Inglis (London), Major R. F. Wall (London), and Mr. A. E. Ward (Slough).

Clinical Matters.

Mr. R. A. Willett said that at the Reading meeting of the Division, about eighteen months ago, mention was made of cases of hæmorrhagic enteritis in greyhounds. They had had a lot of trouble not only in greyhounds, but in all sorts of breeds. The animals would be brought in from exercise or otherwise apparently quite all right, but in twenty-four hours they would be dead from that disease. He would like to know if anybody had any new information about this disease, and could give any hints as to treatment, for nothing, in his experience, seemed to do any good whatsoever.

Major H. Kirk remarked that he thought the matter of hæmorrhagic enteritis treatment had been fairly well thrashed out at a meeting of the Lincoln Division, but his treatment was 10 c.c. normal horse serum intramuscularly, intestinal lavage with salt solution, dimol as an intestinal antiseptic, and, as nourishment, egg and milk, with brandy given frequently through the day. The dog should be kept warm and dry. He suggested that if one did nothing probably 60 or 70 per cent. would die, but if the cases were taken sufficiently early, a fair proportion seemed to be amenable to treatment, unless the attack was very virulent. He had had some cases in the last month that had had a peculiar phase, and that was that, after appearing to be getting on well, following about three weeks' treatment, they then developed ulcers and sloughs about the angles of the mouth, inside the cheeks and sometimes about the body. They became quite prostrate, smelt vilely and faded away to skin and bone and died. He should think the condition was one of secondary invasion by the necrosis bacillus. In some of those cases his *post-mortem* examinations revealed nothing but congestion of practically every organ. Mucous and serous membranes were very dry, and there was nothing to point to the operation of any specific agent; merely this generalised congestion.

Capt. W. L. Little expressed the view that that disease was very similar to what used to be called Stuttgart disease, in which they used to get necrosis of the tongue, very frequently. In one of his cases quite a large portion of the dog's tongue became necrosed, and he took that portion off with a scalpel, when the animal did well. The present condition, designated hæmorrhagic septicæmia, appeared as though it were Stuttgart disease without so much necrosis of the mucous membrane of the mouth. The great thing in Stuttgart was nursing all the time; medicines were of no use by themselves, and his method of treatment was always to give them as little as possible, but by the mouth. He gave bismuth and ipecac in peptonised food, and a little white of egg might be good.

Major Kirk said that, as regarded Stuttgart disease, he always thought that a characteristic and diagnostic symptom of that was the necrosis of the tongue, if the dog lived long enough; but one could keep these hæmorrhagic septicæmia cases a month without their exhibiting necrosis of the tongue. Moreover, in Stuttgart he had never seen dogs pass as much as half a pint of blood, as he had seen in the disease under discussion. Frequently the first indication that a dog was ill with hæmorrhagic enteritis was the discovery outside the kennel of pure blood running under the door. He was not sure that that was true of Stuttgart disease—at least, he believed it was not.

He would like to know if any one had any opinion as whether or not hysteria in dogs was contagious.

The President: We will have a paper on that from you shortly. (Laughter.)

Next Meeting. It was agreed that the next meeting of the Division, to be held on the last Friday in July, should be held at Windsor, details to be arranged later.

(*Continued at foot of first column next page.*)

From The Veterinarian, July, 1828.

We have now the painful task of reporting the result of the adjourned meeting of the Veterinary Medical Society on the 10th of the last month.

Twenty-five veterinarians assembled, and some of them from distant parts of the kingdom, to consolidate and establish this new and promising institution. A few amendments were made in the proposed laws and regulations, and the meeting then proceeded to "elect the proper officers."

While it had been the conviction of the originators of the society that much good must result to the profession from the establishment of a more frequent and friendly intercourse between its members, and the free discussion of every subject connected with veterinary science, it must have been evident that these objects could only be obtained by excluding, as far as possible, all party spirit.

It was too well known to every veterinarian that much private pique and rancorous feeling existed among some of our members. It was the object of the majority, at least, of the originators of this society, to terminate these disgraceful and injurious feuds, and to unite, if it could be effected, all parties in the pursuit of truth. How was this to be accomplished? One thing was plain enough—that the society must not, at its very commencement, assume a party character.

Common courtesy required that the professor of the veterinary college should be, or should be solicited to become, the honorary president of the veterinary medical society. It was a compliment evidently due to the situation he held among us. If an inferior surgeon was appointed, it was declaring, too plainly to be misunderstood, that the professor was not deemed worthy to preside over this society. It was condemning him untried and unheard, and passing on him the severest censure which his most malignant enemies could desire. It was at once to characterize the society as hostile to the professor; depriving it of the co-operation of every friend of his, and necessarily generating a spirit destructive to friendly intercourse and valuable improvement.

Common courtesy, we say, demanded that the professor of the veterinary college should be solicited to become president of the veterinary medical society. The office was *honorary*. The appointment of four vice-presidents to act in rotation sufficiently indicated this. It was an office complimentary to the individual, and, at the same time, intended to increase the respectability and importance of the institution. It gave no patronage; it bestowed no power; it implied no dereliction of principle in a single member—no avowed support of negligence or of error; it was simply *a matter of courtesy, and a determination to avoid even the appearance of party.*

The election of honorary president came on first.

The 14th law declared that he should be elected by *ballot*. The secretary, therefore, gave to each gentleman a slip of paper, on which he might write what name he pleased. This was the usual and fair proceeding. On the examination of the papers by the president, it would appear whom the members, or the majority of them, wished to compliment with the post of honour.

This course, however, was vehemently objected to, and the terms "underhand," "foisting," "packing," "trickery," were unsparingly applied. The truth was that, no particular person being proposed, some gentlemen were deprived of the opportunity of indulging in a long train of invective and abuse against Mr. Coleman.

Mr. W. Goodwin indignantly cut this matter short by proposing that Mr. Coleman should be solicited to become the honorary president of the veterinary medical society.

The old story of the culprit at the halberds was immediately verified. Dissension and uproar were increased to a ten-fold degree. The epithets of "humbug" and "swindling" were applied by one individual to the motion or the mover, or both; and another person, who had declared that "he would stick to Mr. Coleman, and would not rest until he had hurled him from the situation which he unworthily filled," started from his seat and said that, if there were any supposed impropriety in the use of these terms, he begged to share in the full responsibility.

The objections to Mr. W. Goodwin's motion seemed to rank under two heads. The first was, the supposed delinquency of Mr. Coleman as it regarded the education of the pupil and the respectability of the profession. It was replied that this was not the court for the determination of such matters; that Mr. Coleman *was* professor, and the only questions for us to consider were, whether common courtesy did not demand that the office of honorary president should be offered to the head of our profession, and whether we should not establish an avowed party society by selecting any other gentleman.

The second objection was, that Mr. Coleman was not a member of the society, and therefore could not be president of it. Were gentlemen really so ignorant of the constitution of every society as not to know that, in nineteen cases out of twenty, application is made to some nobleman or member of the royal family to accept of a similar office, who was not at the time, and otherwise never would have been, a member of the institution? The question of membership is never mooted. The object is to increase the respectability, and secure the purposes of, the society. When the nobleman has accepted of the proposed office, he qualifies himself to fulfil it, by becoming a member.

It was repeatedly asked, where was the law which, contrary to the usages of all other societies, declared that a person must be a *member* of our's before he could be nominated as honorary president?

After a stormy debate the motion was put to the vote. The numbers on either side were equal, and to our surprise and deep regret, the chairman gave the casting vote against the application to Mr. Coleman.

Mr. J. Percivall was then proposed, who declined the intended honour.

Mr. Joseph Goodwin was next nominated, when it was moved as an amendment, and carried (all disrespect to Mr. Goodwin being disavowed) that, considering the excited state of feeling which then prevailed in the meeting, the election of honorary president should be postponed until the 17th of June. Another gentleman then moved an adjournment of the whole of the remaining business. This was carried by a very considerable majority.

Considerable clamour now arose with regard to the subscriptions which had been collected. No officer had been appointed with whom the money might be deposited. Many members observed, that surely it was safe in the hands of the secretary *pro. temp.* Others were "not so sure of that."

The secretary then indignantly refused to take charge of it. He offered it to the chairman of the latter part of the evening, and then to the son of the first chairman, and when, on their refusal to receive it, the money was left on his table, he got rid of it as quickly as he could by returning to every gentleman his subscription.

Thus ended the first general meeting of veterinary surgeons; and by these last acts, and the non-appointment of any officer, the Veterinary Society (for this name it had

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(*Continued from pevious page*)

There being no other business, the President called upon Professor Macqueen to read his paper on "A Few Lamenesses."

At the conclusion of a prolonged discussion, which was interrupted by an interval for tea, a hearty vote of thanks was accorded the Professor for his paper, and the meeting terminated with similar tribute to the President for his conduct in the Chair.

H. Bell, *Hon. Secretary.*

assumed, the term *medical* being dropped) was virtually broken up.

It was, indeed, sufficiently evident that a society commencing in dissension, and in which good manners and good feelings were so early and so flagrantly violated, could not possibly lead to friendly intercourse, or promote the improvement of the art; and the majority of those who had attended the first two meetings determined no longer to engage in a contest painful to themselves and injurious to the profession; but they would not abandon a purpose which promised so fairly to accomplish the ardent wishes of every friend of the profession, nor permit the cause of veterinary science to be sacrificed to the inconsiderate violence of a few of their brethren. They would not, however, do anything in haste or in anger, but awaited the result of the adjourned meeting of the Veterinary Society (if such should be held) ere they took any decisive steps.

On the 17th of June this meeting was held. It was attended by the Messrs. Cherry, father and two sons, Messrs. Charles Clark, Hart, and Rogers, a minority of precisely one-fourth of the original number. Two veterinary surgeons afterwards dropped in, but who were not friendly to the proceedings of this minority. These six gentlemen, however, determined to proceed in establishing a veterinary society, and abandoning the appointed place of meeting, adjourned to Little Windmill Street.

Of the nine gentlemen who had united in framing the laws and regulations which were submitted to the general assembly, *viz.*, Messrs. Cherry, Rogers, John Field, jun., W. Goodwin, Henderson, John Percivall, W. Percivall, James Turner and Youatt, the seven latter remained. Their names are not unknown to their brethren, and are a sufficient guarantee for the propriety of the motives by which they are actuated.

On the evening of the 21st of June they assembled in their old place of meeting, and re-formed themselves into the *Veterinary Medical Society*, in which they are resolved that party spirit shall never find a place; and which shall be honestly devoted to the pursuit of science, the improvement of their art, and the promotion of friendly intercourse.

This meeting was adjourned to Wednesday, the 25th of June, more fully to consider the laws and regulations which, under the present circumstances of their profession, may be necessary; and to receive the names of those gentlemen who attended the meeting of the 10th of June, or of any of their brethren who enter cordially into their views, and are desirous to unite with them in maintaining the respectability, and effecting the best interests, of their profession.

We make no comment on this simple detail of facts. It speaks sufficiently for itself.

Autosterilising Power of the Nasal Mucous Membrane.

From 90 to 95 per cent. of the viable bacteria placed upon the mucous membrane of the nose in human subjects are rendered non-viable within five to ten minutes. Repeated application of bacteria to the same mucosa is not associated with an exhaustion of the disinfecting mechanism. Cultures grown from bacteria which have survived the initial period in the first application do not show any immunity. They are killed as promptly as the original strain, when appled to the nasal mucosa. "S" and "R" types *B. coli* are killed at the same rate. Isolated instances of the occurrence of an "R" variant in an "S" type of *B. coli*, and also of lysogenic *B. coli* colonies were observed. No growth inhibiting substance acting *in vitro* was found in nasal washings and secretions. Subjects in warm rooms showed a retardation in the disappearance of the bacteria from the nasal mucosa.—L. Arnold, M. L. Ostrom, and Charlotte Singer (*Proc. Soc. Exper. Biol. Med.*, 1928, 25, 624; through *Chem. Abstr.*, 1928, 22, 4561). Ex. *Pharm. Jour.*, No. 3415, Vol. 122.

NOTES AND NEWS.

The Editor will be glad to receive items of professional interest for inclusion in these columns.

Diary of Events.

Aug. 31st to Sept. 6th.—N.V.M.A. Congress at Ayr.

June 17th.—Meeting of the Editorial Committee, N.V.M.A., 10 Gray's Inn Square, W.C., 4-30 p.m.

,, 17th.—D.V.S.M. Examination commences in Edinburgh.

,, 22nd.—Meeting of the Scottish Metropolitan Division, at Blairgowrie.

,, 27th—Meeting of the Lancashire Division, N.V.M.A., at Aytoun Street, Manchester, 3 p.m.

July 3rd.—R.C.V.S. Annual Dinner.

,, 4th.—R.C.V.S. Committee Meetings.

,, 5th.—R.C.V.S. Council Meeting.

,, 9th.—R.C.V.S. Written Examinations.

,, 11th.—R.C.V.S. Oral Examinations begin.

Several members have written us expressing displeasure at the receipt of last week's *Record* in a rolled-up form. This departure from the customary single-fold form of wrapping was necessitated by the inclusion of an art plate, which would otherwise be indelibly creased down the centre. This number also contains an art plate, and instructions have been given for the copies to be rolled less tightly, which procedure, we hope, will remove any cause for complaint.

N.V.M.A. SUBSCRIPTIONS.

Members receiving this week's *Record* in a yellow-coloured wrapper will be reminded thereby that their subscriptions to the Association are in arrear.

R.C.V.S. Obituary.

Dyer, Henry, 61 Quentin Road, Lee, S.E. Graduated London, 17th April, 1871. Died 6th June, 1929. Aged 87 years.

Personal.

A Veterinarian's Masonic Distinction.—His many fellow members of the profession associated with the Craft will desire to congratulate Mr. J. H. Poles, of Whittlesea, upon his reception of Grand Lodge Honours, he having been appointed Assistant Director of Ceremonies, and Standard Bearer in the Royal Arch. Mr. Poles has been the recipient of provincial honours on nine occasions.

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Will.—Richardson, Captain Frank, M.R.C.V.S., R.A.V.C. (T.F.), retd. (56), of High Street, Sydenham, S.E. (net personalty, £1,194) £1,393

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Appointments.—Among the appointments made by the Secretary of State for the Colonies during the month of May, 1929, were those of Mr. N. Burke, M.R.C.V.S., as Veterinary Officer, Nigeria, and Mr. G. N. A. Hall, M.R.C.V.S., as Veterinary Pathologist, Nigeria (Transfer from Uganda).

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Illness of Mr. T. Parker.—Our readers will regret to learn that Mr. Thomas Parker, F.R.C.V.S., of Newcastle-upon-Tyne, was seized with sudden illness on May 12th

and removed to a nursing home. A successful operation for appendicitis was performed, and we are glad to be able to state that Mr. Parker is now well on the way to recovery.

A Correction.—Mr. R. B. Nelder, Hon. Secretary of the Western Counties Division, N.V.M.A., writes to point out that the report of the Bath meeting of the Mid-West and South Wales Division, published on June 1st, erred in stating that the Western Counties Division supported a resolution of the Mid-West concerning the designation of graded milks.

FOOT-AND-MOUTH DISEASE.

After an interval of 10 weeks' complete freedom from foot-and-mouth disease in Great Britain, the existence of the disease was confirmed by the Ministry of Agriculture on Wednesday of last week in three cattle out of a stock of 44 cattle at a farm at Littleton, Winchester. The usual Order has been issued. The Borough of Southampton, in which is situated the only approved landing place for Channel Islands cattle, is included in the area, and the normal trade in cattle from the Channel Islands is, therefore, interrupted for the time being.

CORRESPONDENCE.

Letters to the Editor should reach the Office not later than by the first post on Tuesday morning for insertion in following Saturday's issue.
All correspondence must bear the name and address of the contributor for publication.
The Editor does not hold himself responsible for the opinions of his correspondents.

The Nature and Origin of Fistulous Withers.

TO THE EDITOR OF THE VETERINARY RECORD.

Sir,—May I make one or two comments on Mr. T. G. Heatley's letter *à propos* my paper on "Vaccine Therapy." If he will allow me to say so, the three cases he describes were not true fistula of the withers, but serous abscess. This latter condition, in my experience, is most commonly seen in gross-conditioned horses with "fleshy" withers, and the bruising is sometimes caused by the animal rolling. The effused serum in those cases may remain sterile for a long time; in fact, so long as no solution of continuity of the skin takes place. If, however, bacterial invasion through the skin occurs, an excellent medium for microbial growth is found, *i.e.*, stagnant serum, and true fistula soon develops. I have always looked upon it as bad surgery to open these sterile abscesses for, once opened, bacterial infection invariably follows. Far better is it to aspirate the fluid, rest the animal, keep it indoors, and apply cold water with astringent lotions, and later a blister.

I am, Sir, yours faithfully, W. SCOTT.

Friarn House, Bridgwater.
June 9th, 1929.

Bacillary White Diarrhœa.

TO THE EDITOR OF THE VETERINARY RECORD.

Sir,—It seems rather strange that available literature does not give the power of resistance and the tenacity of life of the *Salmonella pullora*. The individual urge to obtain eggs or chicks from blood-tested stock almost invariably arises from a poultry keeper who has suffered serious losses from B.W.D. and who has lost or done away with all his chicks. He gets the produce of the blood-tested fowls, but has not been warned about the necessity of cleaning up after his previous year's losses, or he has never appreciated the importance of this. The result is that B.W.D. starts again and he has the same unhappy experience, and then he asks: "Do you think they are getting this from last year's birds?" And who can tell him? Perhaps Mr. Matheson can throw some light on the matter. I am assuming that no poultry whatever have been kept on the holding since the previous year's losses.

Yours truly, G. MAYALL.

The Misuse of Letters.

TO THE EDITOR OF THE VETERINARY RECORD.

Sir,—There are many members of the R.C.V.S. who, to gull the public into thinking they are something more than mere *members*, add the letters F.E.V.M.A. to their names. There are other members who do not even know what these letters portend. Their original meaning was "Fellow of the Edinburgh Veterinary Medical Association," but as that Society has been long defunct, they are now merely a Flimsy Excuse for a Very Mean Advertisement.

The Council of the College have called attention by special resolution to their view that the use of any addition to the letters M.R.C.V.S. or F.R.C.V.S., which does not represent an additional qualification, is an attempted fraud on the public. The Council cannot be expected to compel all members who are guilty of this form of indirect advertisement to discontinue the practice, for there is no means of securing general obedience to their ruling.

The profession itself can very quickly stop it, however. Let those members who use the letters "L" or "E" after M.R.C.V.S., and especially those who use such a portentous string as F.E.V.M.A., be made to feel as ridiculous as, in fact, they really are. I need not indicate how the finger of scorn may be pointed at them—perhaps, indeed, this very unkind note may itself have the effect of rendering further action unnecessary.

Yours faithfully- T. LISHMAN.

Common Room, Gray's Inn.
5th June, 1929.

R.C.V.S. Council Election.

TO THE FELLOWS AND MEMBERS OF THE R.C.V.S.

Gentlemen,—Permit me to express my warmest thanks for the generous support I received in the recent election of the members of Council of the Royal College of Veterinary Surgeons. This renewal of confidence after 32 years of continuous service on the Council I regard as a great compliment and is most gratifying to me, and, in return, I promise in the future to give the same unremitting attention to the multitudinous duties appertaining to the position.—I remain, Gentlemen, your obedient servant,

JOSEPH H. CARTER.

Henley-on-Thames, Oxon.
June 8th, 1929.

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I desire to thank my professional brethren who supported my candidature at the recent election of members of Council. As a member of the Veterinary Parliament, I shall endeavour to prove worthy of the honour they have conferred on me. Yours faithfully, J. MACQUEEN.

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Sir,—Will you kindly allow me space to thank those members of the profession who were good enough to record their votes in my favour at the recent election for members of Council, and to say that I hope to be able to justify their confidence in me? Yours faithfully, G. K. WALKER.

Norman House, Abingdon-on-Thames.
June 10th, 1929.

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Sir,—I beg to offer my sincere thanks to the Fellows and members of the R.C.V.S. who have again elected me to the Council—for the eighth time. I much appreciate this mark of confidence and only hope that, in the future, my health will be such as to enable me to further the best interests of our profession, whose welfare I have had, and still have, so much at heart.—Yours faithfully,

Harewood House, J. MCKINNA, F.R.C.V.S.
20 Wentworth Street, Huddersfield.
June 11th, 1929.

The Editor acknowledges the receipt of the following:—

Proceedings of a meeting of the Far-Eastern V.M.A., held at Malacca, March, 1929.

Communications from Mr. W. A. Campbell (Boroughbridge), Major T. Dalling (Beckenham), Major G. W. Dunkin (Mill Hill), Mr. H. Llewelyn-Jones (Denbigh), Capt. A. W. Noel Pillers (Liverpool), Lt.-Col. T. D. Young (London), and W. Jackson Young (Newcastle-on-Tyne).